EOSDIS IV&V
Monthly Status Report

For the Period 7/1/97 to 7/31/97

(Deliverable 0201)

August 15, 1997

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1.   PERFORMANCE INFORMATION

1.1   Contract Organization Chart

Exhibit 1-1 illustrates the current organizational structure of the EOSDIS IV&V team. The approximate number of personnel assigned to each technical task during July is also indicated.

1.2   Programmatic Information

a) Key Recent Accomplishments

- Submitted WV transition status reports to NASA via e-mail on 7/16 and 8/1. As of 8/12, ten personnel have been committed to WV out of a total goal of 12. We expect to have our full commitment of 12 personnel within the September time frame, as planned.

- Supported the finalization and processing of Task SOWs for the period 8/1/97 through 9/30/97.

- Submitted white paper on architectural alternatives for the ECS, as requested by Ellen Herring, SMO Manager.

- Submitted TAM analyzing the EOSDIS cost modeling efforts of Dr. Bruce Barkstrom, as requested by Janice Smith, COTR.

- Continued on-going training of contract personnel. Training in July included self-paced tutorials at the Goddard Learning Center in UNIX System for Users, Windows 95, MS Word, MS Excel, MS Powerpoint, and MS Access. In addition, project-related internal training was conducted for new staff members at both Greenbelt and Fairmont. Two personnel also attended the EOS AM1 Flight Dynamics Support Overview Technical Interchange Meeting on 7/30/97.

- Ensured on-time delivery of contract deliverables as indicated in Exhibit 1-2.

b) Planned Activities

- Continue WV transition effort and submit semi-monthly status reports to NASA.

- Submit CTRs for the newly approved Task SOWs for the period 8/97 through 9/97.

- Provide inputs to NASA recommending a Performance Based Contracting (PBC) structure for the current contract to be initiated on 10/1/97.

Exhibit 1-1: Org Chart (Landscape)

Expected Date Due	Dependency	Milestone/ Deliverable	Task #	Status*	Comments
7/1/97		**EGS I&T Program Test Matrix (Updates)**	**11**	**C**	**Submitted on time.**
7/1/97		**TRMM Operational System Engineering Test Summaries** (TAM entitled "Test Report for TSS/TSDIS Acceptance Testing, Mission SIM#3, and EGS I&T V1-TST-03")	**11**	**C**	**Submitted on time.**
7/2/97		**ECS Assessment/Flash Report**	**8**	**C**	**Submitted on time.**
7/11/97		**ECS Assessment/Flash Report (Update)**	**8**	**C**	**Original report updated in response to ESDIS comments.**
7/15/97		**Monthly Status Report**	**2**	**C**	**Submitted on time.**
7/15/97		**NASA 533 M/Q Financial Report**	**1**	**C**	**Submitted on time.**
7/16/97		**WV Transition Report**	**1**	**C**	**Submitted on time.**
7/18/97		**CCR Impact Analysis Forms**	**8**	**C**	**Submitted on time.**
7/25/97		**ICWG Open Interface Issues Summary Report**	**8**	**C**	**Submitted on time.**
7/31/97		**Assessment of "Progress in Understanding EOSDIS Costs" TAM**	**7**	**C**	**Submitted ahead of schedule on 7/25/97.**
7/31/97		**ECS Assessment/Flash Report**	**8**	**C**	**Submitted on time.**
8/1/97		**WV Transition Report**	**1**	**C**	**Submitted on time.**
8/5/97		**Qualitative Analysis of 6/23/97 RTM Baseline**	**8**	**C**	**Submitted on time.**
8/12/97	One week prior to CCB or ICWG meeting	CCR Impact Analysis Forms	8	IP	
8/13/97		IRDB Demonstration	4	IP	
8/15/97		EOSDIS Network Vulnerability Test Plan and Procedures	8	IP	
8/19/97	At monthly ICWG	ICWG Open Interface Issues Summary Report	8	O	
8/22/97	RTM release + 2 weeks	Monthly Metrics Report / RTM Quantitative Assessment	8	O	
8/29/97		EOSDIS Security Policy and Guidelines (Update)	8	O	
8/97		EGS I&T Program Test Matrix (Updates)	11	IP	

* C = Completed, IP = In Process, O = Open, D = Delayed, CX = Canceled

EXHIBIT 1-2: Status of Milestones/Deliverables

- Continue on-going training of contract personnel. Future training initiatives include OMT training scheduled for the week of 8/4/97 in Fairmont; JAVA training

scheduled for 8/27 - 8/29; and Sybase training scheduled for 9/8 - 9/12. Additional training in Rational Rose and X-Runner is also being planned during the September time frame. Internal training activities include refresher/enhancement training on two key contract-developed tools, PITS and TMDB.

- Continue tracking progress against the Master Milestone Chart as illustrated in Exhibit 1-3.

Exhibit 1-3: Master Milestone Chart (Landscape)

1.3   Technical Task Information

<u>**Task # 4**</u>: **IV&V Infrastructure and Tool Development**

a) Task Accomplishments

- Completed set up of the Microsoft Access test information table structure and an Access interface for performing maintenance. Currently, several Word tables are being maintained which includes data duplication. To minimize table maintenance, a simple Access application has been set up which will support export of data to Word as required.

- Enhanced the Integrated Requirement Database (IRDB) trace report generation utility to produce all reports automatically in one session following IRDB database update. The IRDB database is updated after receiving a new ECS, EDOS, or ESDIS RTM baseline.

- Produced an IRDB Java applet prototype that runs over the web using a browser such as Netscape. This prototype accesses the IRDB Sybase database to obtain requirement and trace information for analysis activities.

- Began working on requested changes to the Test Management Database (TMDB) including:
  - Adding requirement metadata maintenance capabilities
  - Enhancing account and requirement maintenance capabilities
  - Splitting the planning/execution metrics screen into two screens for growth and performance reasons
  - Adding new metrics reporting capabilities

- Provided training to new WV hires and transfers on Project Issue Tracking System (PITS), Automated Requirements Database(ARDB), and the RTM tool.

- Continued M&O activities for PITS, ARDB, TMDB, and all contract homepages.

b) Issues/Concerns

- None.

c) Subcontractor Performance

- EWA's performance has been very good. Specific activities included maintaining and operating the Test Management Database (TMDB).

d) Planned Activities

- Continue developing a WWW interface to the IRDB. Accept requests for additional IRDB reports.

- Demonstrate WWW IRDB capabilities. Planned attendees include EOSDIS IV&V Task 8 personnel, Greg Blaney (WV NASA), and Mark Simons (GSFC NASA).

- Support transfer of Rational Rose capabilities to Fairmont, WV.

- Support configuration and utilization of the McCabe tools for reviewing ECS code.

- Continue to reconfigure IV&V databases, homepages, and tools as necessary to support ECS Release B IV&V analysis and I&T activities.

- Install new RTM baselines as they are received. Produce related reports. Transfer data to ISE Sybase databases as required.

- Continue support (refinement, development, and maintenance) for the ARDB, PITS, TVDB, and TMDB client/server tools, as well as all contract homepages.

Task # 8: Development Life Cycle Analysis

a) Task Accomplishments

Planning and Rapid Analysis Team:

- Completed a count of ECS classes by subsystem and delivered this data to NASA.

- Developed a methodology and the script files to count/analyze the points developed by the Release B team so that projections of development maturity can be made.

- Reviewed the initial source code analysis methodology.

System and Interfaces Analysis Team:

- Completed qualitative analysis of the 6/23/97 RTM Baseline. Began preparation of TAM detailing the results of this analysis.

- Held a teleconference between IV&V requirements analysis team and ECS requirements engineers to clarify release attribute definitions and requirement baseline implementation issues.

- Prepared comments and metrics for the 7/25/97 PITS-ICWG Issues Summary Report.

- Attended weekly ICD Audit Work-off Plan status meetings at Hughes.

- Reviewed and provided comments on the following CCRs:

CCR #	Title
505-41-34-002	Incorporate ERSDAC's comments to ECS-ASTER ICD
423-10-36-002	Landsat 7 Level 1 MSRD Baseline Updates
505-42-01-010	Landsat 7 Data Products Formats Documentation
505-01-41-156	Delete DID 223, External Traffic Rqmts
505-41-40-005	Correct ESDT names in GSFC DAAC ICD
505-01-41-158	Move SAGE-II ancillary data sets to B.1 [Delete SAGE-II ancillary data sets]
505-41-34-003	Replace AGE with AGD (ASTER ICD, ECS-NSI ICD, EBNet-SMC ICD)
423-42-01-011	Baseline X-band EOS AM-1 EPGS RF ICD
423-41-55-001	Baseline the ECS-LPGS ICD
423-42-02-001	Baseline the TSS-LaTIS ICD

- Worked with the DAS interface definition team to identify remaining issues to be addressed in the ICD Between ECS and DAS.

- Began reviewing the ICD between ECS and NSIDC DAAC. This ICD is an advance copy of one that should be submitted the week of 7/28.

- Reviewed drafts of the EAIP alternative architectures.

System Security Analysis Team:

- Continued SafeSuite tool operational assessment at the GreenTech 4 Lab. Vendor provided on-site support to discuss technical issues and recommend ways to improve security team proficiency with the tool.

- Began documenting scanning activities and tool capabilities. This information will be used to develop the EOSDIS Network Vulnerability Test Plan and Procedures due in August. The plan/procedures document will outline the security assessment activity to be conducted at each of the DAACs supporting the TRMM mission. These activities will include a network evaluation, pre-operational test planning, SafeSuite testing, post-operational analysis, and written report with recommendations.

- Coordinated with EOSDIS security staff members to set up the first set of network assessments to be conducted using SafeSuite.

- Arranged for EOSDIS Security Working Group (ESWG) to witness vendor demonstration of Real Secure, a tool that provides real-time monitoring of a specified network and that can be used in conjunction with the SafeSuite Scanner. The EOSDIS Information Technology Security Official (EITSO) is currently evaluating this tool for its possible use in ensuring overall EOSDIS network security.

Test Analysis and Witnessing Team:

- Provided RCC Phase I Test Procedures Analysis to Glenn Iona.

- Started analysis of RCC Phase II/III test procedures.

- Attended the Pre-RCC TRR meeting.

- Continued RCC capability and test requirement analysis.

- Participating in the AT Procedures Analysis and Walk-throughs.

- Participating in developing a minimal set of tests combining all (SV, AT, EGS I&T) test activities.

- Participated in developing an Access database for requirements to test cases traceability for RCC iteration.

ECS Assessment / Flash Report Team:

- Delivered initial IV&V Flash Report on 7/2/97. Updated Flash Report based on comments received, and resubmitted report on 7/11/97.

- Participated in ongoing EAIP efforts. Provided a draft copy of an ECS Architecture Risk Mitigation paper to Ellen Herring for distribution.

- Delivered second Flash Report on 7/31/97.

b) Issues/Concerns

- The lack of access to a current ECS Release B design continues to constrain level of design analysis achievable by IV&V. In addition, there is no available Rational Rose reverse engineering schedule nor priority schema.

- The lack of a complete set of B.0 L4 requirements to test case traces in the RTM Repository has constrained IV&V's ability to conduct quantitative analyses.

- A teleconference call between Task 8 personnel and ECS requirements engineers revealed that the feedback comments they write concerning our qualitative analysis TAMs have been delivered to ESDIS but not forwarded to IV&V. It would be helpful for IV&V to receive this feedback.

c) Subcontractor Performance

- CTA is leading the SIA Team. Their technical staff also supports other integrated analysis teams within Task 8. Their performance has been very good.

- SES is leading the TAW Team. Their technical staff also supports other integrated analysis teams within Task 8. Their performance has been very good.

d) Planned Activities

Planning and Rapid Analysis Team:

- Participate in test witnessing/demo activities as necessary.

- Participate in Test Case/Procedure walk-throughs if conducted.

- Become familiar with the McCabe OMT analysis tools and metrics provided.

- Continue source code analysis and methodology development.

System and Interfaces Analysis Team:

- Deliver the Qualitative Analysis TAM for the 6/23/97 RTM Baseline.

- Begin analyzing the 8/8/97 RTM Baseline and developing the resulting TAM.

- Support ongoing review of CCRs.

- Continue data entry into PITS ICWG repository, and present data at next ICWG status meeting scheduled for 8/19/97.

- Continue support of ECS ICD issue work-off.

System Security Analysis Team:

- Complete full range of network test scans for UNIX systems, using SafeSuite and Linux OS. Include Intranet, Firewall, and Web tests.

- Complete full range of network test scans under the Windows NT environment.

- Time various scanning activities to determine the duration of specific tests for planning purposes.

- Submit draft version of EOSDIS Network Vulnerability Test Plan and Procedures to NASA on 8/15/97.

- Work with EITSO to develop CCR for the EOSDIS Security Policy and Guidelines document to be submitted by 8/29/97.

- Support any briefings and demonstrations associated with upcoming SafeSuite tests.

Test Analysis and Witnessing Team:

- Attend Readiness Review for RCC TRR.

- Perform test procedure analysis for SV / AT / EGS I&T.

- Assist the Report Card Team with their requirements.

- Continue analyzing the August Demo capabilities against the DSWG requirements.

- Continue assisting the EAIP effort.

ECS Assessment / Flash Report Team:

- Continue to review information from across the IV&V effort for inclusion in future Flash Reports.

- Develop and deliver Flash Reports as scheduled.

Task # 11: EOS Ground System Integration and Test

a) Task Accomplishments

EGS Version 1 Test Planning:

- Participated in next phase of joint NYMA/GSFC DAAC TRMM TSS - TSDIS testing.

Integration Schedule Tracking and Analysis:

- Reviewed/Revised EGS I&T test schedule to include EGS 11 performance testing and DAAC inputs.

- Initiated ECT3 test planning and schedule.

Integration Test Tool Definition and Plans:

- Collected monthly test package metrics.

- Captured test program metrics including test execution results and automatic requirements metric collection.

EGS Confidence Test Planning:

- Met milestones to schedule DAAC telecons with NSIDC, LaRC, GSFC, and EDC. Successfully negotiated terms on DAAC personnel participation (3-6), test scenario definition approach, strategy for functional requirements interpretation, SSIT prep coordination with EGS I&T, and test package review.

- Submitted first draft of EGS 3 Version 2 Baseline Certification Test for format and FOS content review. Also initiated and participated in ECT3/ EGS 3 scope definition meeting with AM-1 project (Flight Ops only).

- Delivered updated EGS I&T Program Test Matrix.

- Met target date to deliver updated EGS I&T Confidence Test Packages, including 30 day maturity milestone for FOS V2 confidence tests.

- Continued B0/B0'/B1 test package allocation analysis.

- Attended and coordinated with ESDIS Test Data Set Working Group and EDOS TOG.

- Continued Landsat 7 MRTT coordination; revised Landsat 7 EGS I&T test plan.

EGS Version 1 Integration and Test:

- Submitted ECT2 test report draft to support M. Max ESDIS FOS test manager.

- Participated in TSS/TSDIS Acceptance Testing.

- Supported FOS DRB, ETS DRB, and EDOS with Discrepancy Reports.

b) Issues/Concerns

- The latest ESDIS Test Replan has a direct impact on EGS I&T objectives, deliverables, and the working relationship established with the DAACs.

c) Subcontractor Performance

- Subcontractor performance has been very good.

d) Planned Activities

- Continue to plan EGS I&T Science/Systems IPT test package targets, rescheduling as required based on DAAC inputs and/or ESDIS replan.

- Continue to plan EGS I&T test data plan target dates, working with EGS I&T Test Data Coordinator.

- Continue Landsat 7, AM-1, and Sage III Mission joint test planning.

- Complete monthly metrics, matrix update, and ongoing task support activities.

2. FINANCIAL/CONTRACTUAL INFORMATION

This Section

Has Been Removed

Due to Proprietary Content.